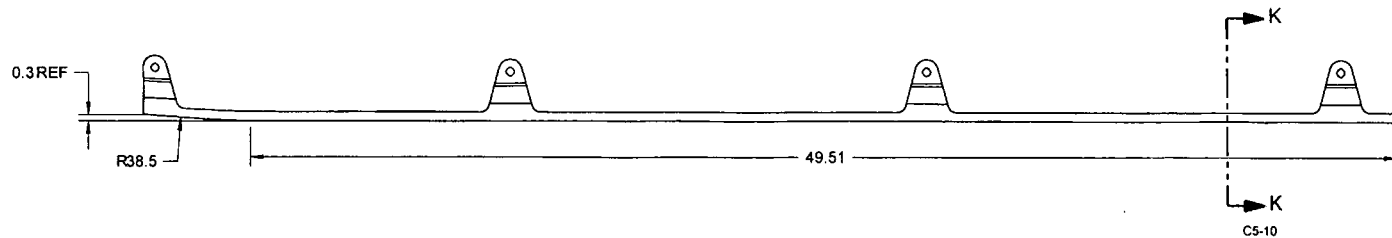
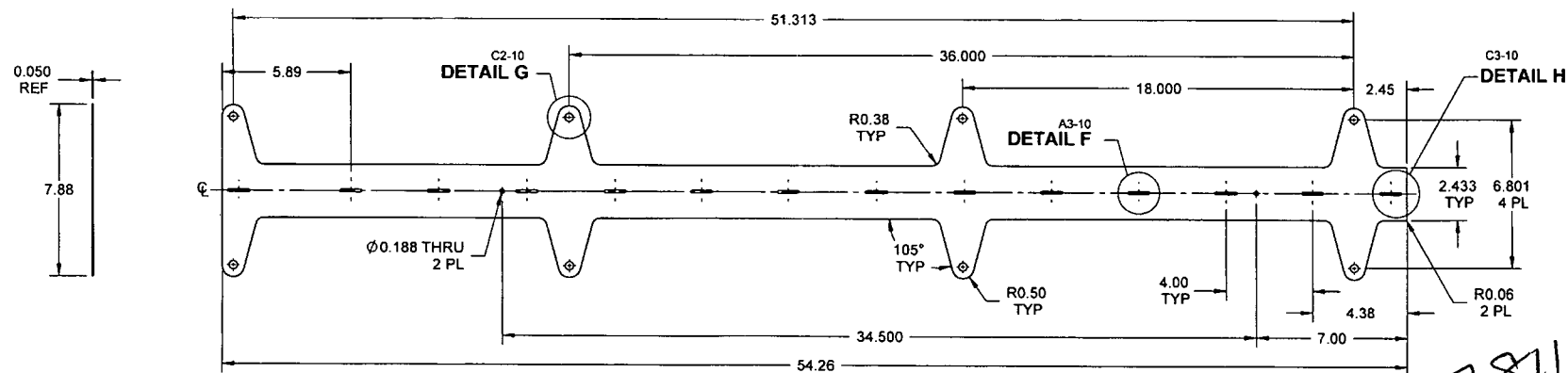


DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3849	SHEET 10 OF 10
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC.	
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47811
RELEASED
10/15/10



D3849-7 PLATE
(MAKE FROM D3849-7F)



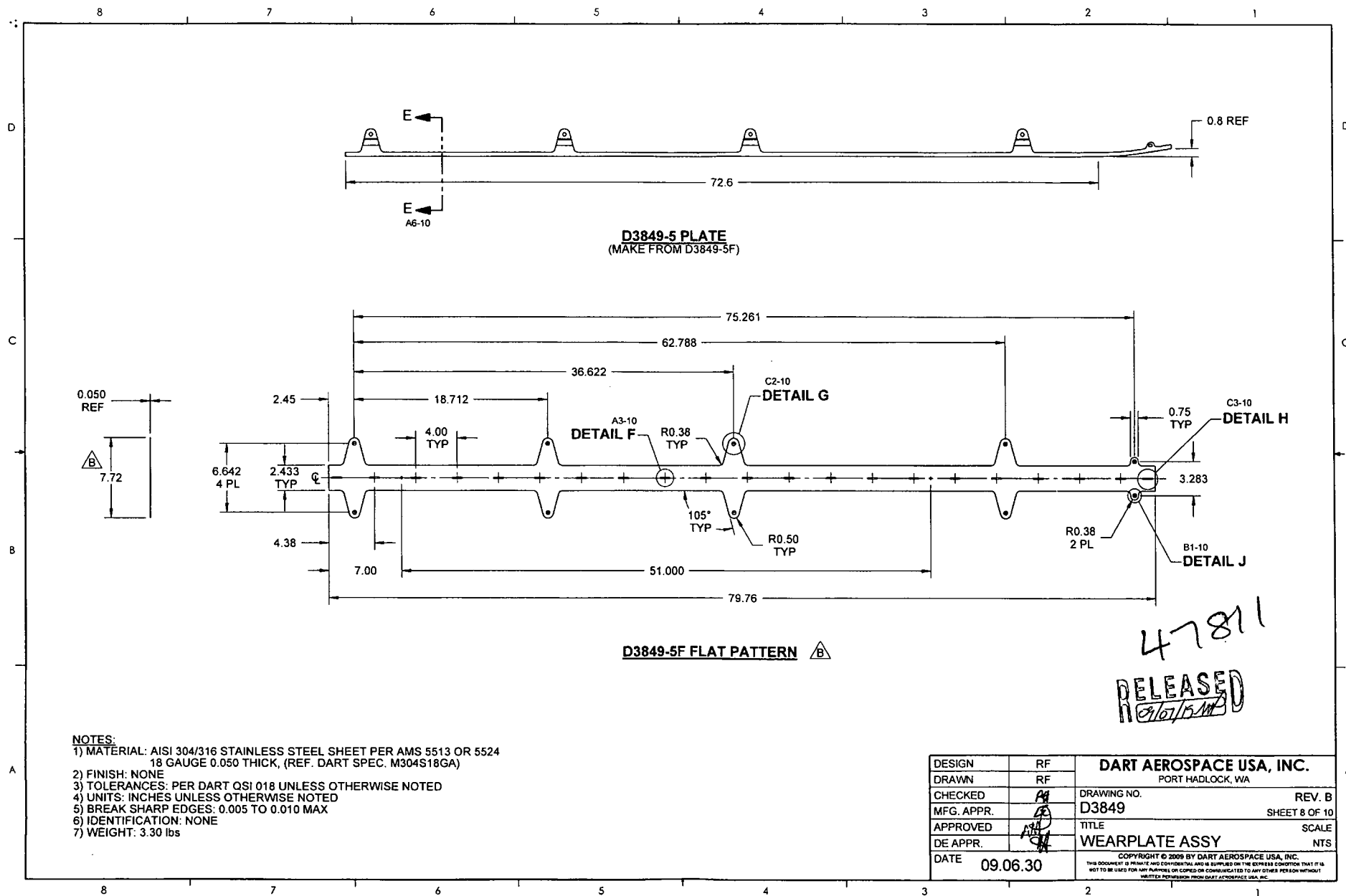
D3849-7F FLAT PATTERN

47811
RELEASED
10/27/15

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.34 lbs

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3849	SHEET 9 OF 10
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSY	NTS
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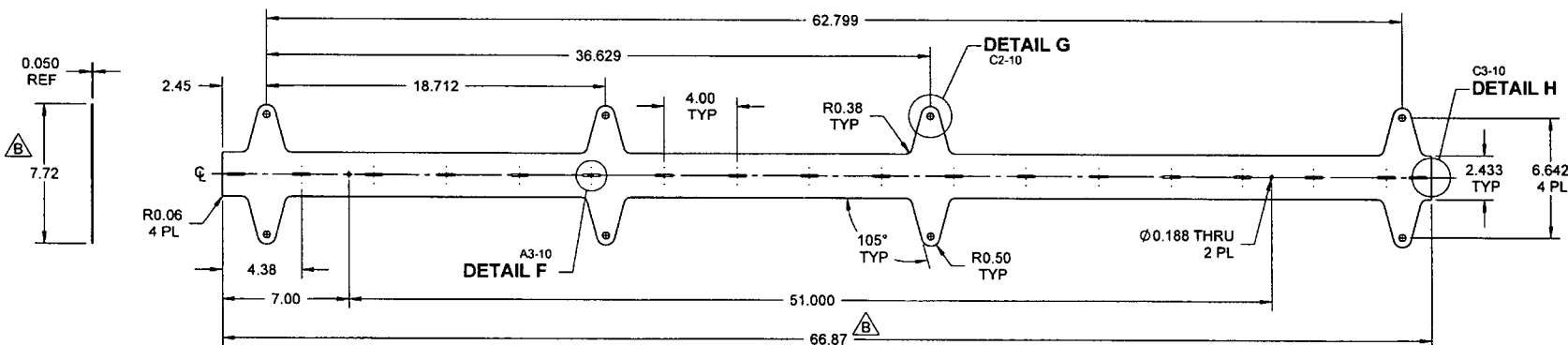
DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D3849	SHEET 8 OF 10
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
DATE	09.06.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

8 7 6 5 4 3 2 1



D3849-3 PLATE
(MAKE FROM D3849-3F)

E
E
A6-10



D3849-3F FLAT PATTERN \triangle B

47811
RELEASED
12/67/5142

- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 2.82 lbs

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	AM	DRAWING NO.	REV. B
MFG. APPR.	AM	D3849	SHEET 7 OF 10
APPROVED	AM	TITLE	SCALE
DE APPR.	AM	WEARPLATE ASSY	NTS
DATE	09.06.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

8 7 6 5 4 3 2 1

0.3 REF

R38.5

49.51

D3849-1 PLATE
(MAKE FROM D3849-1F)

A6-10

0.050
REF

Δ B
7.72

ϕ 0.188 THRU
2 PL

Δ B
51.313

36.000

DETAIL G

R0.38
TYP

C2-10

DETAIL F

A3-10

18.000

C3-10

DETAIL H

Δ B
2.433
TYP

6.642
4 PL

Δ B
R0.06
2 PL

34.500

Δ B
54.26 REF

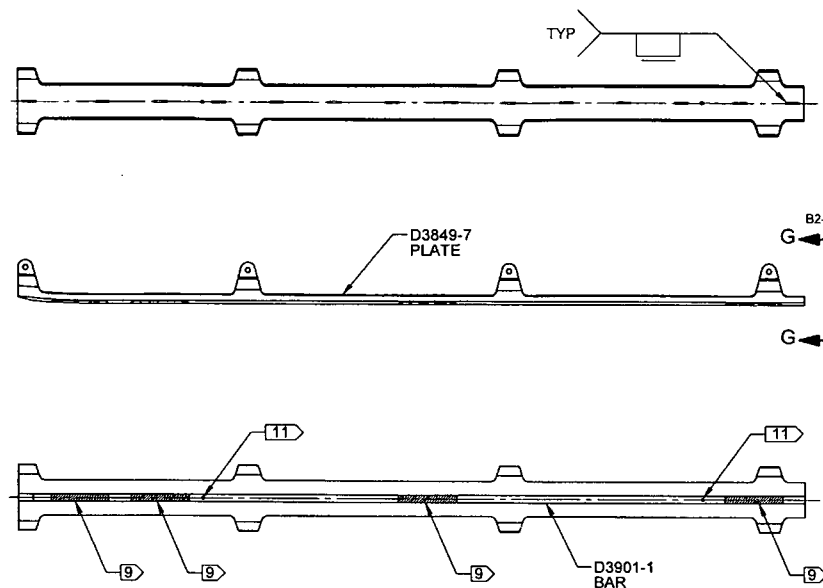
D3849-1F FLAT PATTERN Δ B

NOTES:

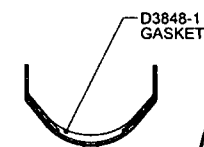
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.33 lbs

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D3849	SHEET 6 OF 10
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
DATE	09.06.30	<small>COPYRIGHT © 2006 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

47811
RELEASED
09/16/15






D3849-047 FWD WEARPLATE ASSY, FLOAT GEAR 

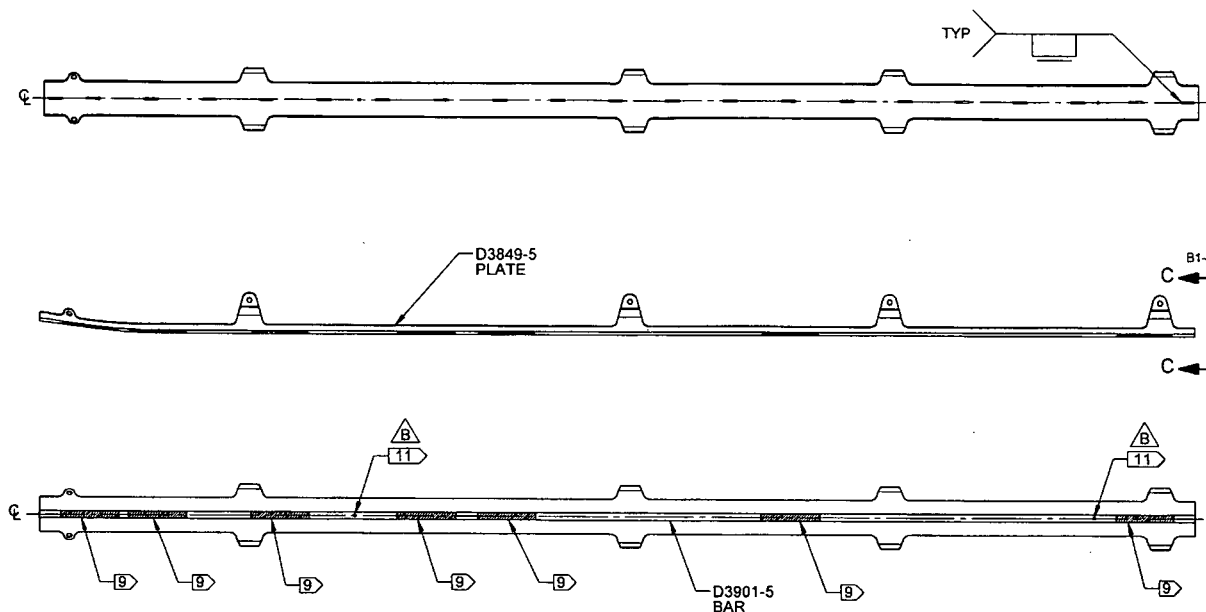


SECTION G-G C3-5
SCALE 2X

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3849-047" USING YELLOW PAINT MARKER AT INSIDE SURFACE
- 7) WEIGHT: D3849-047 = 4.26 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK x 0.50 WIDE, FLUSH WITH D3901-1 BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, BOND D3848-7 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE
- 11) TRANSFER DRILL \varnothing 0.188 HOLES FROM D3849-7 PLATE TO D3901-1 BAR

DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED		DRAWING NO. D3849	REV. B
MFG. APPR.		SHEET 5 OF 10	
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSY	NTS
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D3849-045 AFT WEARPLATE ASSY, FLOAT GEAR

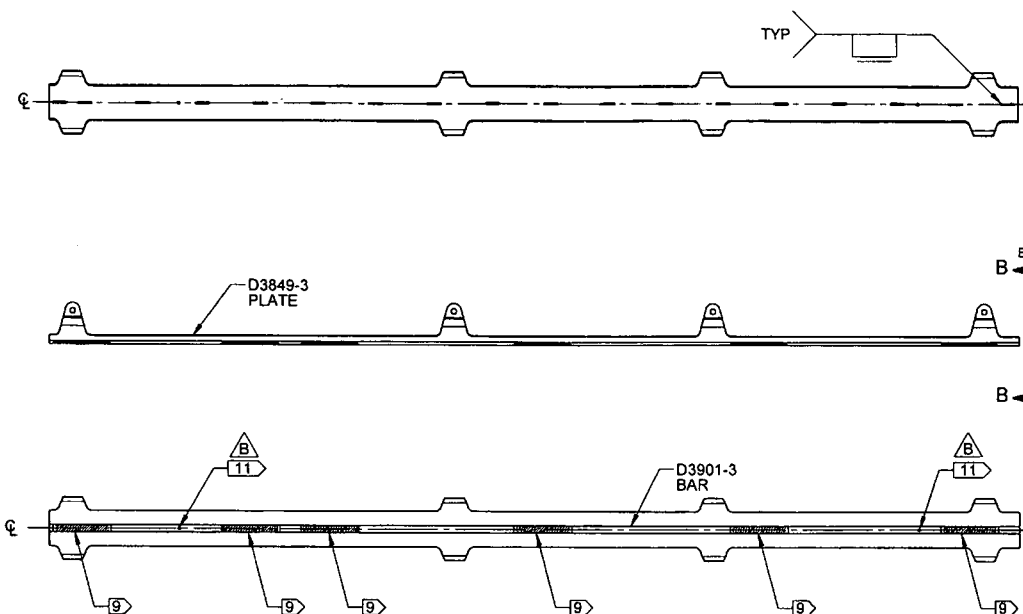
SECTION C-C C2-4
SCALE 2X

RELEASED
09/15/11

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3849-045" USING YELLOW PAINT MARKER AT INSIDE SURFACE
- 7) WEIGHT: D3849-045 = 5.98 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK x 0.50 WIDE, FLUSH WITH D3849-5 BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, BOND D3848-5 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE
- 11) TRANSFER DRILL $\varnothing 0.188$ HOLES FROM D3849-5 PLATE TO D3901-5 BAR

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3849	SHEET 4 OF 10
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
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D3849-043 AFT WEARPLATE ASSY, STD GEAR

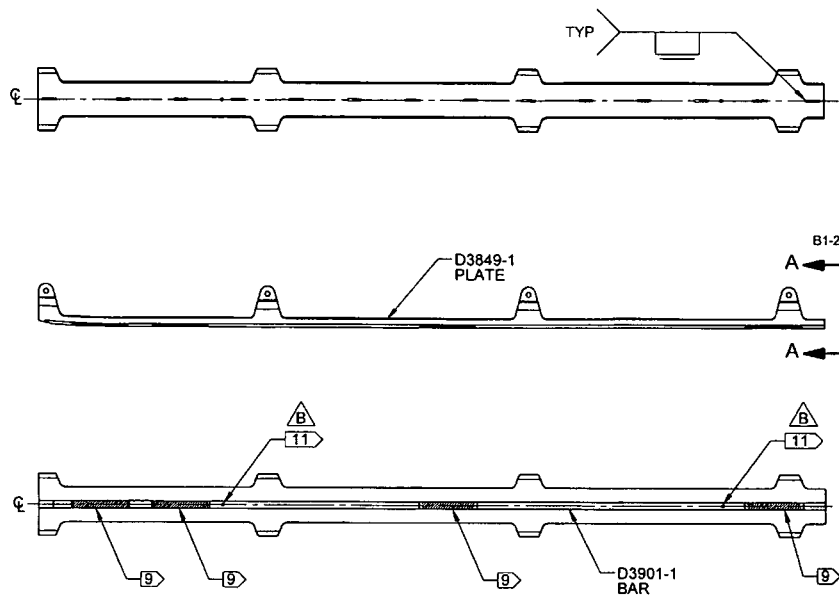
SECTION B-B C2-3
SCALE 2X

RELEASED
10/2/15

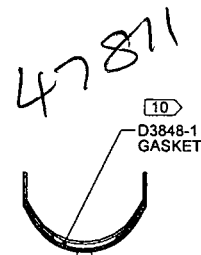
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3849-043" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3849-043 = 5.21 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK x 0.50 WIDE, FLUSH WITH D3901-3 BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, BOND D3848-3 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE
- 11) TRANSFER DRILL $\varnothing 0.188$ HOLES FROM D3849-3 PLATE TO D3901-3 BAR

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3849	SHEET 3 OF 10
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
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D3849-041 FWD WEARPLATE ASSY, STD/FLOAT GEAR B



SECTION A-A C3-2
SCALE 2X

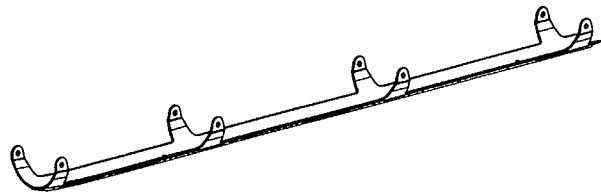
RELEASED
18/07/15

NOTES:

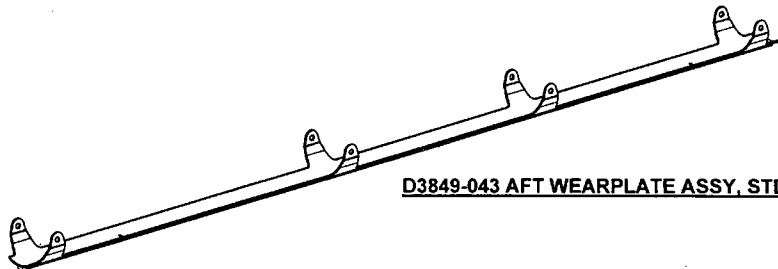
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3849-041" USING YELLOW PAINT MARKER AT INSIDE SURFACE
- 7) WEIGHT: D3849-041 = 4.24 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK x 0.50 WIDE, FLUSH WITH D3901-1 BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, BOND D3848-1 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE
- 11) TRANSFER DRILL $\varnothing 0.188$ HOLES FROM D3849-1 PLATE TO D3901-1 BAR

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D3849	SHEET 2 OF 10
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
DATE	09.06.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

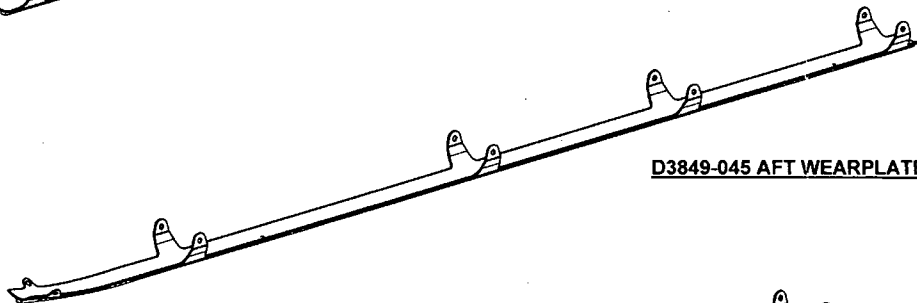
8 7 6 5 4 3 2 1



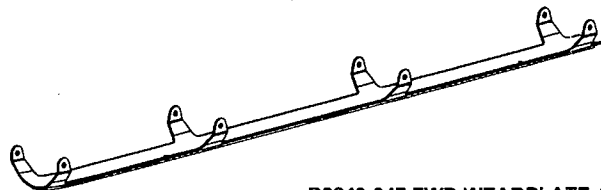
D3849-041 FWD WEARPLATE ASSY, STD GEAR



D3849-043 AFT WEARPLATE ASSY, STD GEAR



D3849-045 AFT WEARPLATE ASSY, FLOAT GEAR



D3849-047 FWD WEARPLATE ASSY, FLOAT GEAR

ITEM	QTY -041	QTY -043	QTY -045	QTY -047	P/N	DESCRIPTION
1	X				D3849-041	FWD WEARPLATE ASSY, STD GEAR
2		X			D3849-043	AFT WEARPLATE ASSY, STD GEAR
3			X		D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
4				X	D3849-047	FWD WEARPLATE ASSY, FLOAT GEAR
11	1				D3849-1	PLATE
12		1			D3849-3	PLATE
13			1		D3849-5	PLATE
14				1	D3849-7	PLATE
15	1				D3848-1	GASKET
16		1			D3848-3	GASKET
17			1		D3848-5	GASKET
18				1	D3848-7	GASKET
19	1			1	D3901-1	BAR
20		1			D3901-3	BAR
21			1		D3901-5	BAR
31	A/R	A/R	A/R	A/R	2059B	HARDCOAT
32	A/R	A/R	A/R	A/R	1300 (OR 1300L)	3M SCOTCH-GRIP ADHESIVE

47811
RELEASED
9/67/15/11

B	REVISED FLAT PATTERN Ø0.375 WAS SLOT HOLE ON D3849-1F/3F/5F (ZN A4-5, B4-7, B4-8, C2-10, B2-10); ADD D3849-047 (ZN D4-1, A4-1 & B4-5) & D3849-7/7F (ZN C4-9, A4-9); ADD SECTION K-K (ZN C5-10); 0.88 WAS 0.875 & 0.44 WAS 0.438 (ZN A3-10); ADD 0.25 & 0.88 (ZN D4-10, D3-10); ADD 0.88 & 0.44 (ZN C3-10 & B3-10); ADD FLAG NOTE (ZN A8-2, C6-2, C3-2, A8-3, C6-3, C3-3, A8-4, C6-4, C2-4); 66.87 WAS 67.36 (ZN S4-7)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED	RF		
MFG. APPR.	RF		
APPROVED	RF		
DE APPR.	RF		
DATE	09.06.30		
DART AEROSPACE USA, INC. PORT HADLOCK, WA			
DRAWING NO. D3849		REV. B	
TITLE WEARPLATE ASSY		SHEET 1 OF 10	
SCALE		NTS	
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8 7 6 5 4 3 2 1

DART

Purchase Order

Date	Page
May 11, 2009	1
Purchase Order Number PO00008780	

Dart Aerospace Ltd
1270 Aberdeen St
Hawksbury, Ontario K6A 1K7
Phone: (613)632-9577
Fax: (613)632-1053

FAXED
6076511

Vendor Address:

Magna Stainless
5775 rue Kieran
St Laurent, Quebec H4S 0A3
Canada
Phone (514) 339-1211
Fax (514) 339-1105

Ship To:

Main Finished Goods Location
Dart Aerospace Ltd
1270 Aberdeen St
Hawksbury, Ontario K6A 1K7

Reference	Contact	Vendor Number	PO Date	Terms	Ship Via	Expected Arriva
		VC-MAG002	May 11, 2009	N30	yours	May 12, 2009

Qty. Ordered	Item Number	Description	Expected Arrival	Drop-Ship	Unit Cost	UOM	Extended Price
64.0000	M304S18GA	304/316 .050 Sheet Comments: MATERIAL: AISI 304/316 AS PER AMS 5513 OR 5524	12/05/2009	No	5.000000	sf	320.0
<div>MATERIAL CERTIFICATION REQ'D UPON DELIVERY</div>							
Comments:		Tax Summary:		Less:			
		GST		16.00		included tax	
		ONTST		0.00			
Entered By: CL		CLAVOIE		Subtotal		320.00	
Approved By:				Total tax		16.00	
				Total purchase order in			
				CAD Dollars		336.00	

POSCO Mill Test Certificate/검사증명서 MO 17117

Certificate No./증명서번호: 080910-PRSE-010-001
Date of Issue/발행일자: Sep., 16, 2008
Surface Finish/표면마무리: NO.2B

Order No./계약번호: 0008333485

PO No./주문번호: 0353485

Supplier/주최자: DAE WOO INTERNATIONAL CORP.

Commodity/품명: STAINLESS COLD ROLLED COIL

Customer/고객사: MAGNA STAINLESS INC.

Spec & Type/규격: ASTM A240-304

OK Power

Size/차수	Product No./제품번호	Quantity/수량	Weight/중량 (kg)	Heat No./재질번호	P.S.T. No./P.S.T. 번호	Tensile/인장세력 (MPa)	Y.S./항복 (MPa)	El./연신 (%)	Hard./경도 (HRB)	Chemical Composition/화합성분 (%)
0.90x1219x0	QGH0789A	1	4.677	SE37928	T	288	243	60	92.5	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.18, Ni 8.64, Cu 0.42, Mo 0.2, N 0.004
0.90x1219x0	QGH0789B	1	4.677	SE37928	B	277	243	60	93.6	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.18, Ni 8.64, Cu 0.42, Mo 0.2, N 0.004
*** Sub. Total (010) ***		2				277	243	60	93.6	
1.20x1219x0	QGH0031B	1	6.848	SC17935	T	281	251	60	92.3	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.11, Ni 8.04, Cu 0.38, Mo 0.15, N 0.002
1.20x1219x0	QGH0031C	1	4.180	SC17936	T	281	251	60	92.5	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.11, Ni 8.04, Cu 0.38, Mo 0.15, N 0.002
1.20x1219x0	QGH0031D	1	6.588	SC17937	T	281	251	60	92.4	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.11, Ni 8.04, Cu 0.38, Mo 0.15, N 0.002
*** Sub. Total (020) ***		3				281	251	60	92.4	
1.50x1219x0	QGH0039A	1	6.368	SC17797	T	285	243	58	93.7	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.02, Ni 8.03, Cu 0.38, Mo 0.14, N 0.002
1.50x1219x0	QGH0039B	1	6.379	SC17797	B	285	243	58	93.7	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.02, Ni 8.03, Cu 0.38, Mo 0.14, N 0.002
1.50x1219x0	QGH0039C	1	5.225	SC17797	T	285	243	58	93.7	C 0.02, Si 0.02, Mn 0.03, P 0.003, S 0.003, Cr 18.02, Ni 8.03, Cu 0.38, Mo 0.14, N 0.002
*** Sub. Total (030) ***		3				285	243	58	93.7	

Position: T: Top, M: Middle, B: Bottom
Tensile Test: Direction: Transverse, Gauge Length: 50mm (Rectangular)
Yield Method: 0.2% offset
Division: L: Lab's Analysis
Chemical Composition Unit: 2x14000, 3x14000, 4x140000, 5x140000
Tr: It is within the standard range (<0.008%) and include trace element.

We hereby certify that the material herein has been tested in accordance with the order and specification.

Test Certificate is issued according to EN10204-3-1B.
This Mill Test Certificate cannot be copied for any purpose.

Surveyor To:

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

Chief of material testing section

Jo, Won

MAGNA

Magna Stainless

5775 Kieran St, Saint-Laurent, Quebec H4S 0A3
Phone: (514) 339-1211 Watts: 1-800-363-6646 Fax: (514) 339-1105

PACKING LIST

I011033

Page: 1 of 1

SOLD TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY, ON
K6A 1K7
Contact: CHANTAL

HAWKESBURY, ON
K6A 1K7
Ship Terms: PREPAID

MTR: Y

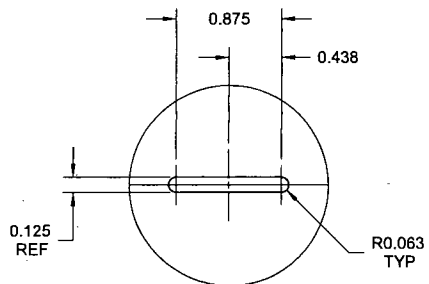
STOCK

SPECIAL INSTRUCTIONS

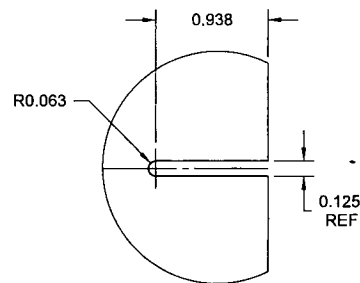
Currency		Sales Person	Customer Phone	Customer Fax	Customer PO	
CANADIAN DOLLARS		ERYCK BLAIS	(613) 632-5200	(613) 632-1053	8780	
Sales Order	Terms	Ship Via		Date Ordered	Date Required	Date Shipped
W012262	NET 30 DAYS	NIR:R-557065-1		05/11/09	05/12/09	05/12/09

Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
2	✓	PC	STAINLESS SHEET SSH 304 2B 18ga x 48" x 96" 134 LB / 2 PC	L019433	SC17938	2
Skids: 1				Total Weight:		134 LB

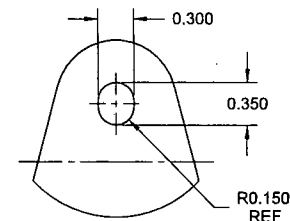
Received by: _____ Date: _____ Signature: _____



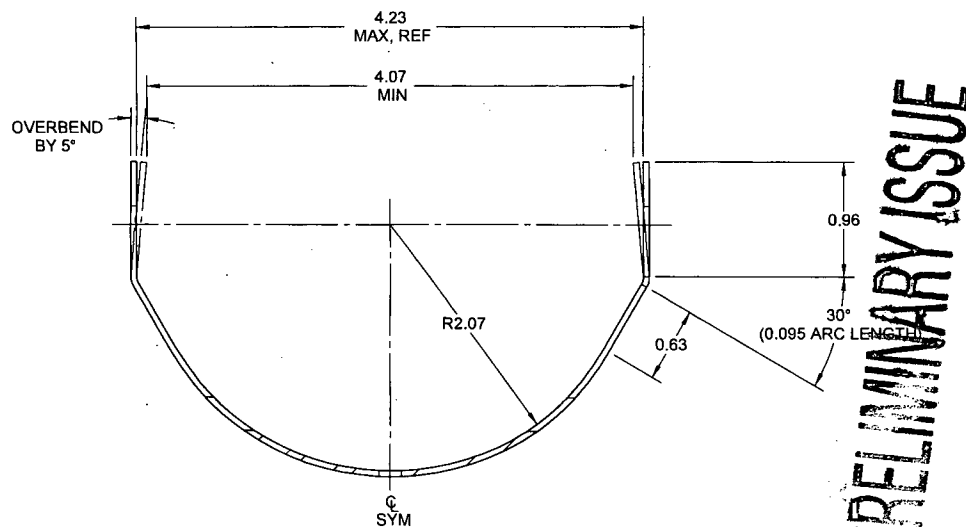
DETAIL F
SLOT DETAIL TYP
SCALE 4X
C3-5
B6-6
C3-7



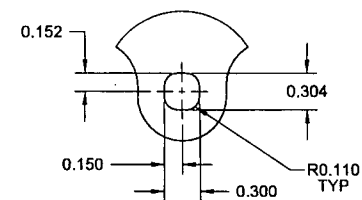
DETAIL H
SLOT DETAIL TYP
SCALE 4X
C1-5
C1-6
C1-7



DETAIL G
SLOT DETAIL TYP
SCALE 4X
C4-5
C3-6
C4-7



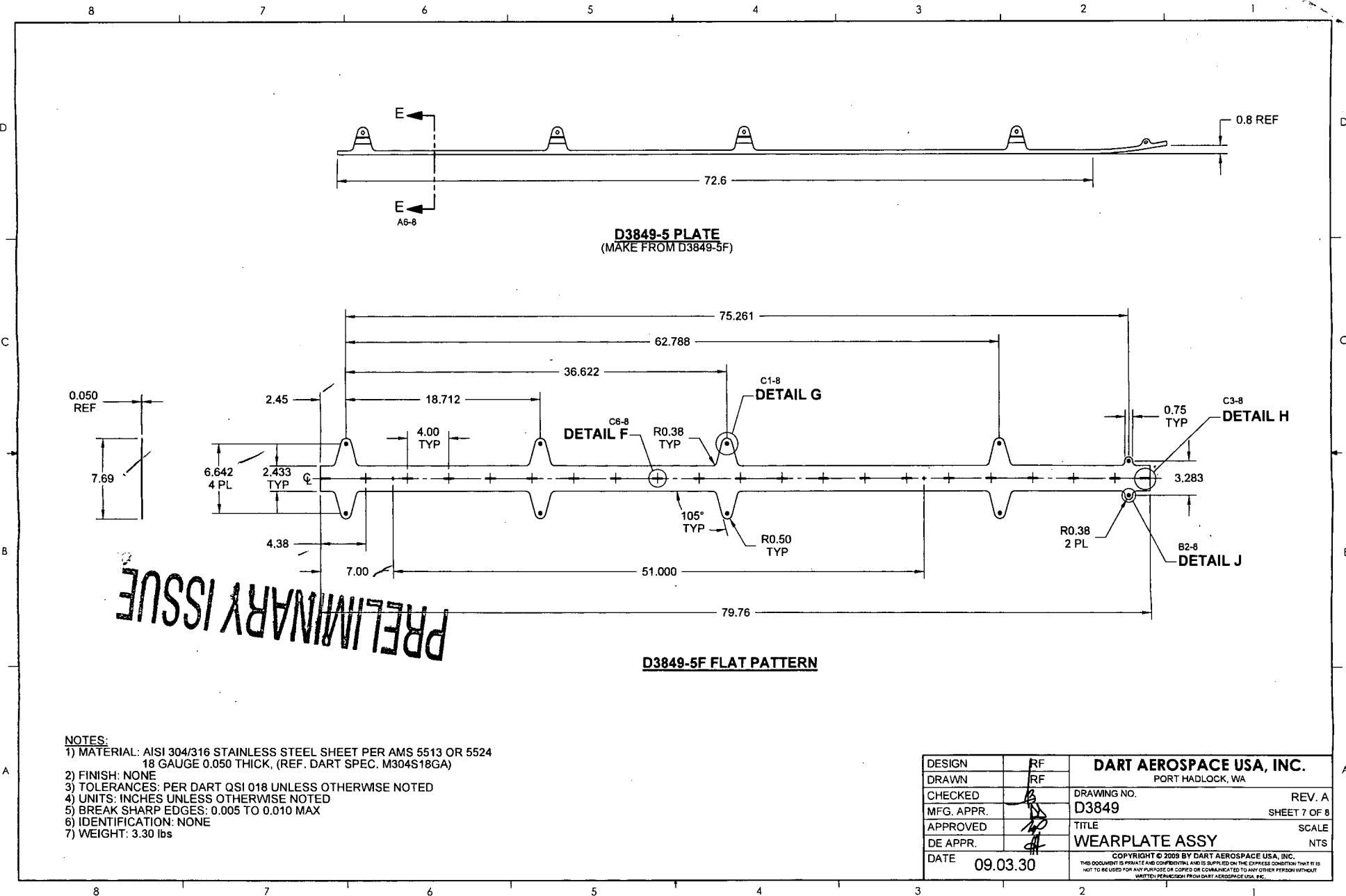
SECTION E-E
SCALE 4X
D2-5
D2-6
D6-7



DETAIL J
DETAIL TYP B1-7
SCALE 8X

PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. A
MFG. APPR.	RF	D3849	SHEET 8 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
DATE	09.03.30	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. A
MFG. APPR.	RF	D3849	SHEET 7 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
DATE	09.03.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

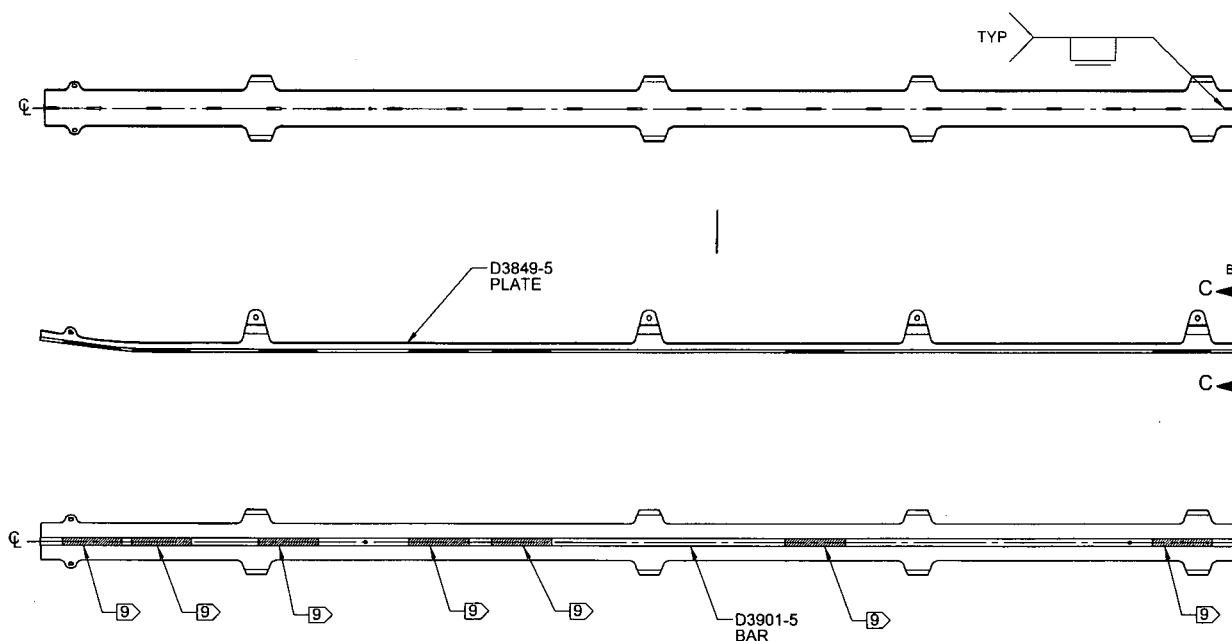
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

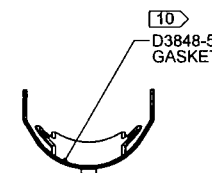
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3849-045 AFT WEARPLATE ASSY, FLOAT GEAR



SECTION C-C C2-4
SCALE 2X

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3849-045" USING YELLOW PAINT MARKER AT INSIDE SURFACE
- 7) WEIGHT: D3849-045 = 5.98 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK x 0.50 WIDE, FLUSH WITH D3849-5 BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, BOND D3848-5 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE

16 09-05-08
PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D3849	SHEET 4 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
DATE	09.03.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

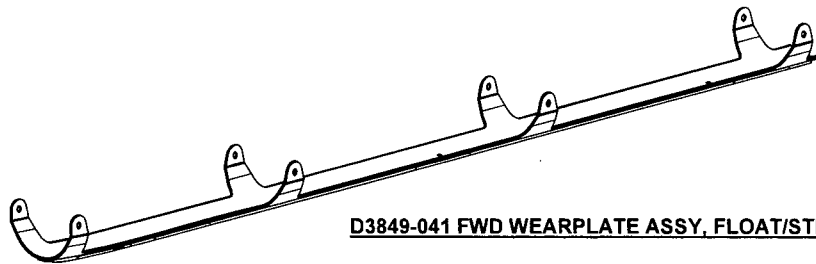
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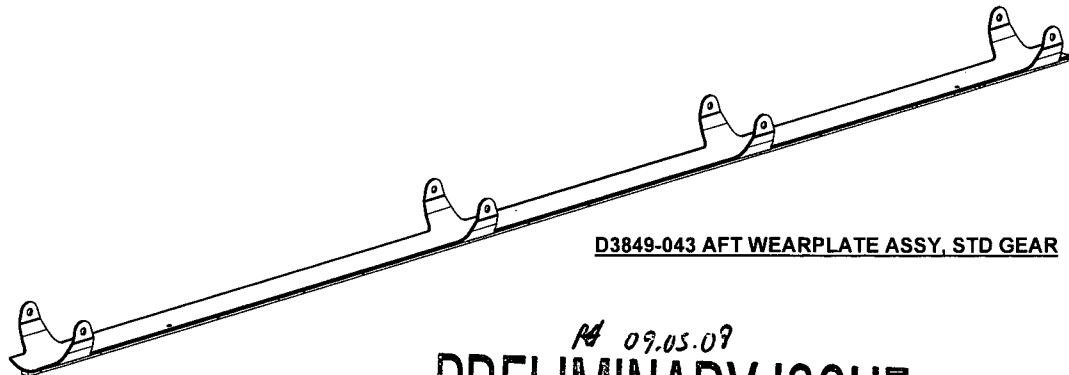
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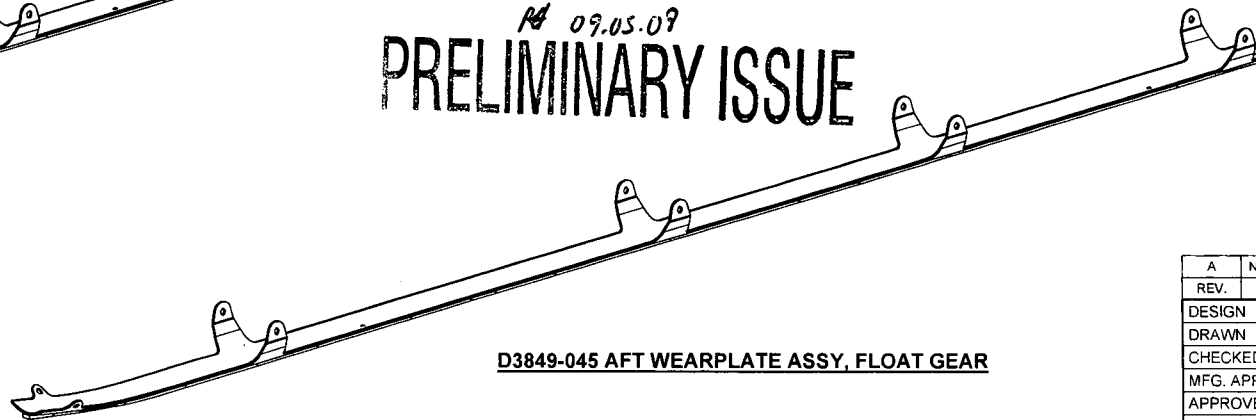
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D3849-041 FWD WEARPLATE ASSY, FLOAT/STD GEAR



D3849-043 AFT WEARPLATE ASSY, STD GEAR



D3849-045 AFT WEARPLATE ASSY, FLOAT GEAR

RD 09.05.09
PRELIMINARY ISSUE

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3849-041	FWD WEARPLATE ASSY, STD/FLOAT GEAR
2		X		D3849-043	AFT WEARPLATE ASSY, STD GEAR
3			X	D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
11	1			D3849-1	PLATE
12		1		D3849-3	PLATE
13			1	D3849-5	PLATE
14	1			D3848-1	GASKET
15		1		D3848-3	GASKET
16			1	D3848-5	GASKET
17	1			D3901-1	BAR
18		1		D3901-3	BAR
19			1	D3901-5	BAR
31	A/R	A/R	A/R	2059B	HARDCOAT
32	A/R	A/R	A/R	1300 (OR 1300L)	3M SCOTCH-GRIP ADHESIVE

A		NEW ISSUE		RF	09.03.30
REV.	DESCRIPTION			BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA			
DRAWN	RF				
CHECKED		DRAWING NO.	REV. A		
MFG. APPR.		D3849	SHEET 1 OF 8		
APPROVED		TITLE	SCALE		
DE APPR.		WEARPLATE ASSY	NTS		
DATE	09.03.30				

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8

7

6

5

4

3

2

1

DART AEROSPACE LTD		Work Order: 47811
Description: AFT WEAR PLATE		Part Number: D3849-045
Inspection Dwg: D3849-5 Rev: PRE Lim		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype Prelim

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.300	±.010	.304	*			
.350	±.010	.350	*			
.304	±.010	.305	*			
.300	±.010	.303	*			
.125	±.010	.129	*			
.875	±.010	.877	*			
2.433	±.010	2.434	*			
6.642	±.010	6.640	*			
2.45	±.030	2.450	*			
4.38	±.030	4.380	*			
7.00	±.030	7.002	*			
4.00	±.030	3.998	*			
51.000	±.010	51.000	*			
79.76	±.030	79.75	*			
3.283	±.010	3.280	*			
.75	±.030	.752	*			
18.712	±.010	18.712	*			
36.622	±.010	36.622	*			
62.788	±.010	62.788	*			
75.261	±.010	75.261	*			
.050	±.010	.049	*			
7.69	±.0010	7.69	✓			

Measured by: RB	Audited by: [Signature]	Prototype Approval: [Signature]
Date: 9-5-13	Date: 09-05-13	Date: 09-09-12

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 07/05/2009 3:53:55 PM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT WEARPLATE ASS'Y, STD GEAR

Job Number: 47811

Part Number: D3849045

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

13.0

D38485

Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
Gasket
batch: _____

14.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1
1- Bond D3848-5 gasket to inner surface of wearplate using a thin layer of 3m 1300/1300L scotch grip
adhesive as per dwg
BATCH: _____

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

**ENGINEERING
APPROVAL**

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Identify with Dart part # using a fine point permanent marker and Stock
Location: _____

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W 07.06.23

POSITIVE RECALL

EFFECTIVE 09.05.08 AUTH /

RELEASED _____ DATE _____

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 07/05/2009 3:53:55 PM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT WEARPLATE ASS'Y, STD GEAR

Job Number: 47811

Part Number: D3849045

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

20906-02(2)

7.0

D39015

Bar



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)
Bar
batch: _____

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1- On D3901-5 bar, fill cut outs with hardcoat welding rod as per dwg D3849
2059 B Hardcoat Welding Rod
BATCH#: _____

2- Weld D3901-5 bar to wearplate by positioning holes together as per dwg D3849
304 S.S. Welding Rod
BATCH #: _____

*No longer
needed
per D215
09.06.23*

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

**ENGINEERING
APPROVAL**

11.0

POWDER COATING

POWDER COATING



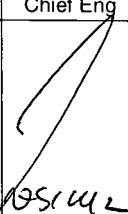


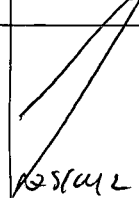
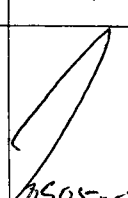
Comment: POWDER COATING
Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME: _____
OVEN TEMPERATURE: _____
FINISH TIME: _____

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3849-045 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>47811</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
6905-13.	2.0	1 part the .350 x .300 holes me off center by 0.050". on one side Part shifted during operation. Machine Malfunction rc: process it happens on long parts occasionally.		Scrap / destroy & replace qty 1 <u>M.111743</u>	 9-5-13	 6905-13	 6905-13	 6905-13

NOTE: Date & initial all entries

Date: Thursday, 07/05/2009 3:53:55 PM
User: Melanie Fauteux

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: AFT WEARPLATE ASSY, STD GEAR
Job Number	: 47811		
Estimate Number	: 13895		
P.O. Number	:	Part Number	: D3849045
This Issue	: 07/05/2009 S.O. No. :	Drawing Number	: D3849 PREL
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : LARGE FAB ASSY	Drawing Revision	: PREL
Previous Run	:	Material	:
Written By	: <u>MF 09-05-08</u>	Due Date	: 14/05/2009 Qty: 2 Um: Each
Checked & Approved By	:		
Comment	: Est Rev:A 09.04.29 new issue EC verified by:DD		

Additional Product

PRELIMINARY ISSUE ^{PL} 09.05.08

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M304S18GA	304/316 .050 Sheet
-----	-----------	--------------------



Comment: Qty.: 3.7905 sf(s)/Unit Total: 7.5810 sf(s)

304/316 .050 Sheet

batch: 111743 B9-5-13

**CERTIFICATE OF CONFORMITY
REQUIRED**



2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET

1-Cut as per Dwg D3849

Dwg Rev: PRE

Prog Rev: Lim

B9-5-13

(2)

2-Deburr if necessary

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



B9-5-13



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



2905-13

(2)



PR

Comment: SECOND CHECK

5.0	BRAKE NC	NC BRAKE
-----	----------	----------



Comment: NC BRAKE

Form as per dwg D3849

DE 8179
DE 8155

SB 09/05/14

(2)

Process Sheet

omer: CU-DAR001 Dart Helicopters Services













Drawing Name: AFT WEARPLATE ASS'Y, STD GEAR

Job Number: 47811

Part Number: D3849045

Job Number:



Seq. #:	Machine Or Operation:	Description :
12.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION
		  (2)
Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION		
13.0	D38485	Gasket
		 
Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s) Gasket batch: <u>47815</u>		
14.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
		 
Comment: SMALL & MEDIUM FAB RESOURCE 1 1- Bond D3848-5 gasket to inner surface of wearplate using a thin layer of 3m 1300/1300L scotch grip adhesive as per dwg BATCH: <u>MLL 428</u>		
15.0	QC5	INSPECT WORK TO CURRENT STEP
		  09.06.22 (1) REV D.S.
Comment: INSPECT WORK TO CURRENT STEP		
16.0	PACKAGING 1	PACKAGING RESOURCE #1
		 
Comment: PACKAGING RESOURCE #1 Identify with Dart part # using a fine point permanent marker and Stock Location: _____		
17.0	QC21	FINAL INSPECTION/W/O RELEASE
		 
Comment: FINAL INSPECTION/W/O RELEASE		

Job Completion



POSITIVE RECALL

EFFECTIVE _____ AUTH _____
RELEASED _____ DATE _____

RA
09.07.01

Process Sheet

Order: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT WEARPLATE ASSY, STD GEAR

Job Number: 47811

Part Number: D3849045

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

6.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

7.0	D39015	Bar
-----	--------	-----



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bar

batch: 047816

8.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
-----	-------------	------------------------------



Comment: LARGE FABRICATION RESOURCE 1

1- On D3901-5 bar, fill cut outs with hardcoat welding rod as per dwg D3849

2059 B Hardcoat Welding Rod

BATCH#: M11680

2- Weld D3901-5 bar to wearplate by positioning holes together as per dwg D3849

304 S.S. Welding Rod

BATCH#: M102421

9.0	QC9	VISUAL WELDING INSPECTION
-----	-----	---------------------------



Comment: VISUAL WELDING INSPECTION

10.0	QC5	INSPECT WORK TO CURRENT STEP
------	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

11.0	POWDER COATING	POWDER COATING
------	----------------	----------------



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME: 7:10 AM

OVEN TEMPERATURE: 320°F

FINISH TIME: 7:40 AM

911 09-06-22 X2

Date: Thursday, 11/06/2009 10:38:01 AM
 User: Melanie Fauteux

Process Sheet

DUPLICATE

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 47811
 Estimate Number : 13895
 P.O. Number :
 This Issue : 11/06/2009 S.O. No. :
 Prsht Rev. : NC
 First Issue : 07/05/2009 Type : LARGE FAB ASSY
 Previous Run :
 Written By :
 Checked & Approved By : ME 09-08-11
 Comment : Est Rev:A 09.04.29 new issue EC verified by:DD

Drawing Name : AFT WEARPLATE ASSY, STD GEAR
 Part Number : D3849045
 Drawing Number : D3849 PREL
 Project Number : N/A
 Drawing Revision : PREL
 Material :
 Due Date : 14/05/2009

Qty: 1 Um: Each

split

POSITIVE
RECALL

Additional Product

PRELIMINARY ISSUE

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M304S18GA . 304/316 .050 Sheet



Comment: Qty.: 3.7905 sf(s)/Unit Total : 7.5810 sf(s)
 304/316 .050 Sheet
 batch: 11743 B 9-6-17

2.0 WATER JET FLOW WATER JET



Comment: FLOW WATER JET
 1-Cut as per Dwg D3849
 Dwg Rev: _____
 Prog Rev: _____
 2-Deburr if necessary

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0 QC8 SECOND CHECK



ENGINEERING
APPROVAL



Comment: SECOND CHECK

Sub 12
See separate parts were originally righten!!

9/09/06/05

5.0 BRAKE NC NC BRAKE



Comment: NC BRAKE

Form as per dwg D3849

SB 02/06/17

Date: Thursday, 11/06/2009 10:41:20 AM

User: Melanie Fauteux

JOB HISTORY : DETAIL

Job Number	: 47811	Customer	: Dart Helicopters Services LLC.
Estimate Number	: 13895	DWG Name	: AFT WEARPLATE ASS'Y, STD GEAR
Purchase Order #	:	Part Number	: D3849045
Complete Date	: / / : : AM	DWG Number	: D3849 PREL
		Rev.	: PREL

DUE DATE	ORDERED	DELIVERED
14/05/2009	2	0

1.0 M304S18GA-304/316 .050 Sheet		INVENTORY ITEM			
DATE	EMPLOYEE	TYPE	Qty		COST
13/05/2009	BLEC01: Bleck, Henry	M304S18GA	10.000		\$50.52
Subtotal:		QTD: 0	CTD: 10		\$50.52
Lot # 111743 Qty. 10					

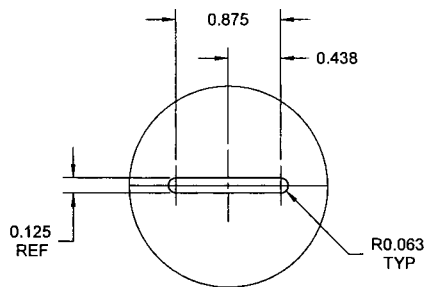
2.0 WATER JET Internal Operation								
DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost	
13/05/2009	BLEC01: Bleck, Henry	Run	2.000	1.16	\$19.55	1.16	76.05	
Subtotal:		QTD: 2 CTD:	0	1.16	\$95.60			

5.0 BRAKE NC		Internal Operation						
DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost	
14/05/2009	BOUC01: Boucher, Sylvie	Run	0.000	0.84	\$14.15	0.84	55.04	
Subtotal:		QTD:	0	CTD:	0	0.84	\$69.19	

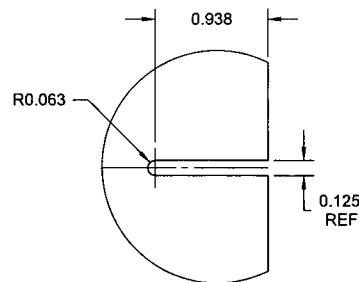
8.0 LARGE FAB 1		Internal Operation						
DATE	EMPLOYEE	TYPE	Qty	Time(hrs)	COST	MTime(hrs)	Mach.Cost	
03/06/2009	LARO01: Larocque, Eric	Run	1.000	2.28	\$41.77	2.28	83.12	
Subtotal:		QTD:	1	CTD:	0	2.28	\$124.89	

		TIME	COST	
	Machine Time:	4.28	\$214.21	
	Labor:	4.28	\$75.47	
	Sub-contract (external Op.):		\$0.00	
	INVENTORY ITEM:		\$50.52	
	SUB-COMPONENT (SUB-JOB):		\$0.00	
Total:			\$340.20	

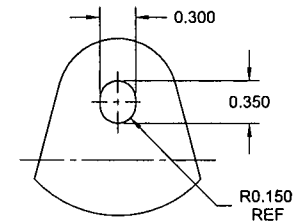
COST PER UNIT: \$340.20



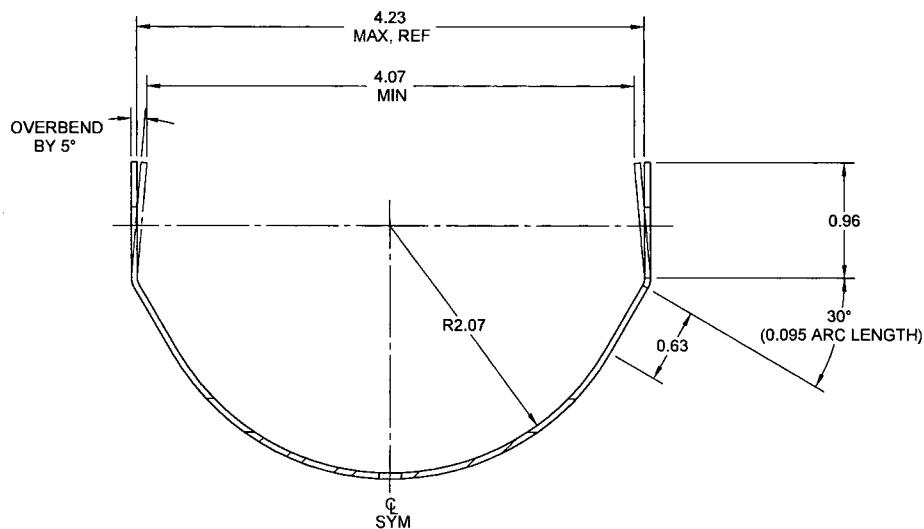
DETAIL F
SLOT DETAIL TYP
SCALE 4X
C3-5
B6-6
C3-7



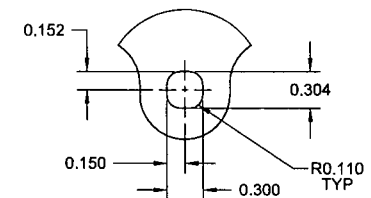
DETAIL H
SLOT DETAIL TYP
SCALE 4X
C1-5
C1-6
C1-7



DETAIL G
SLOT DETAIL TYP
SCALE 4X
C4-5
C3-6
C4-7



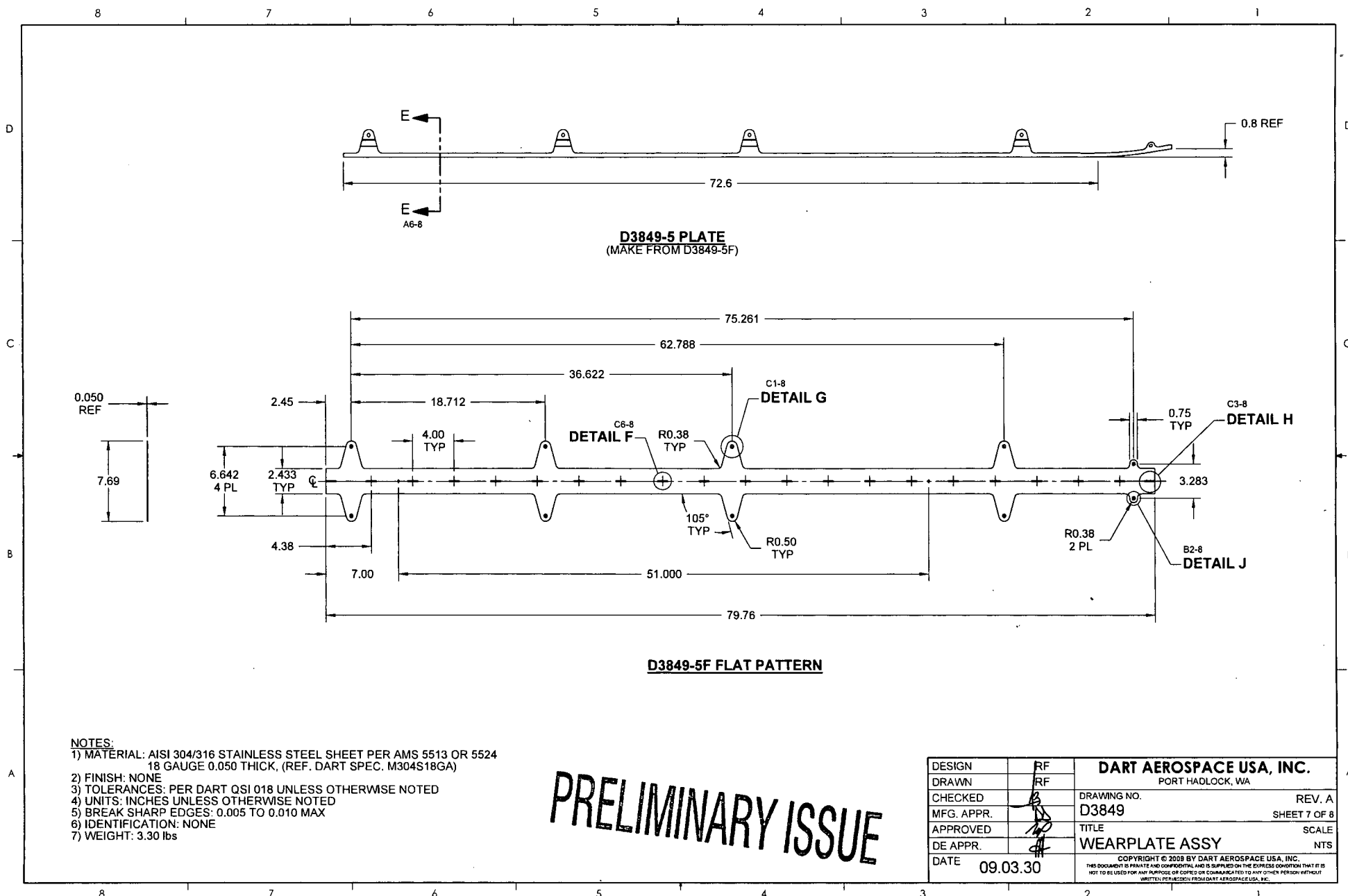
SECTION E-E
SCALE 4X
D2-5
D2-6
D6-7



DETAIL J
DETAIL TYP B1-7
SCALE 8X

PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	B	DRAWING NO.	REV. A
MFG. APPR.	SS	D3849	SHEET 8 OF 8
APPROVED	MP	TITLE	SCALE
DE APPR.	#	WEARPLATE ASSY	NTS
DATE	09.03.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



D3849-5 PLATE
(MAKE FROM D3849-5F)

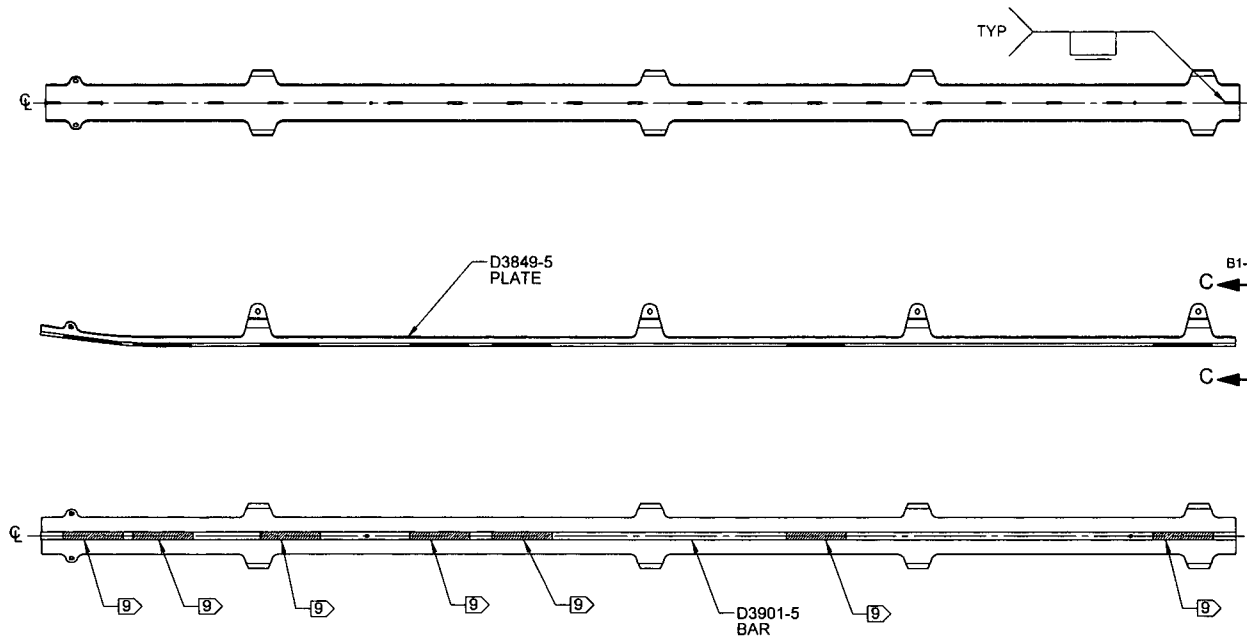
D3849-5F FLAT PATTERN

- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 3.30 lbs

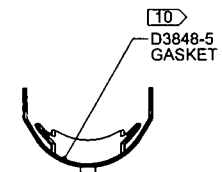
PRELIMINARY ISSUE

DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. A
MFG. APPR.	RF	D3849	SHEET 7 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
DATE	09.03.30	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNITIES TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

PRELIMINARY ISSUE



D3849-045 AFT WEARPLATE ASSY, FLOAT GEAR



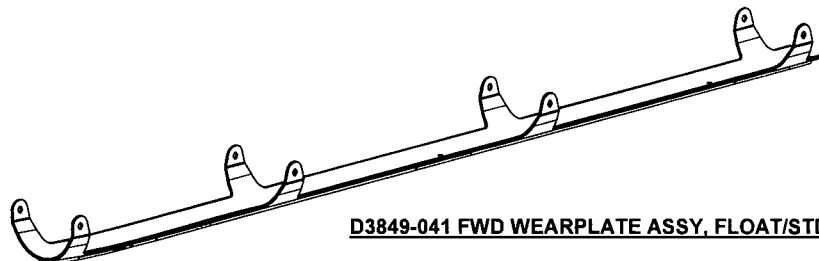
SECTION C-C C2-4
SCALE 2X

NOTES:

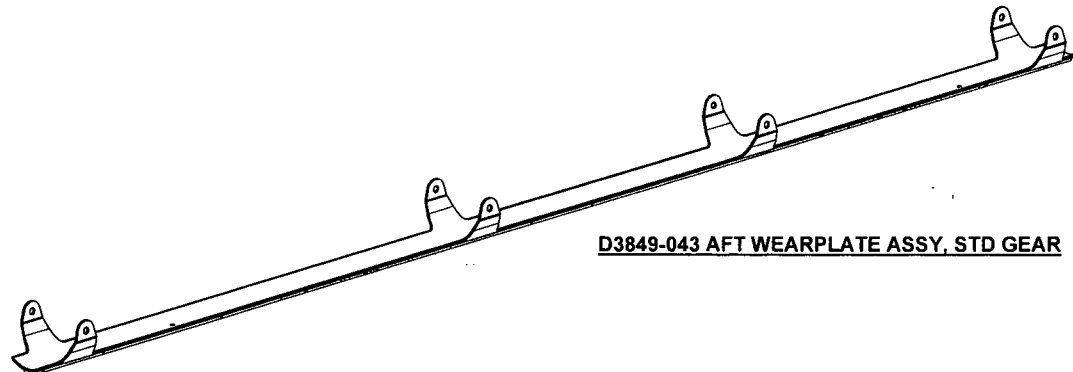
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3849-045" USING YELLOW PAINT MARKER AT INSIDE SURFACE
- 7) WEIGHT: D3849-045 = 5.98 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK x 0.50 WIDE, FLUSH WITH D3849-5 BAR ON ALL 3 SURFACES
- 10) AFTER FINISH, BOND D3848-5 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE

DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED	RF	DRAWING NO. D3849	REV. A
MFG. APPR.	RF	SHEET 4 OF 8	
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSY	NTS
DATE	09.03.30	<small>COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

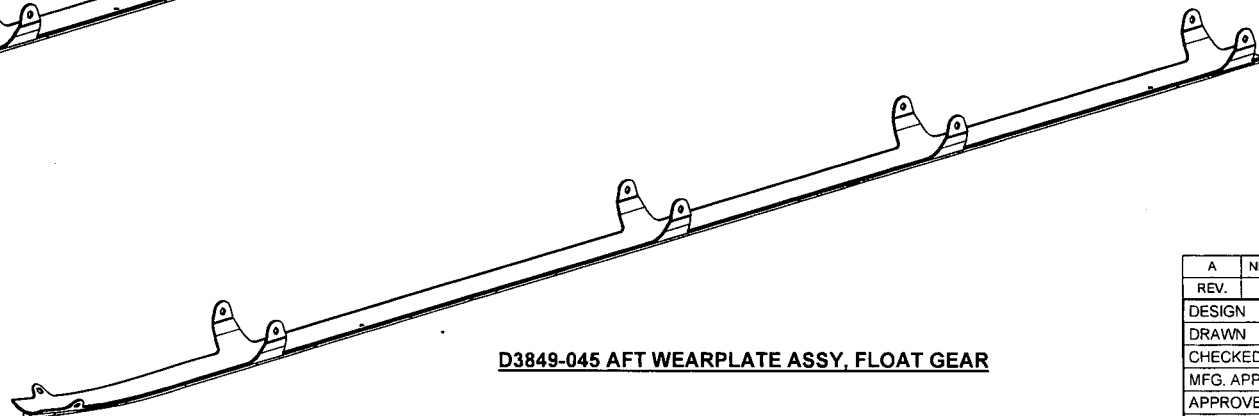
PRELIMINARY ISSUE



D3849-041 FWD WEARPLATE ASSY, FLOAT/STD GEAR



D3849-043 AFT WEARPLATE ASSY, STD GEAR



D3849-045 AFT WEARPLATE ASSY, FLOAT GEAR

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3849-041	FWD WEARPLATE ASSY, STD/FLOAT GEAR
2		X		D3849-043	AFT WEARPLATE ASSY, STD GEAR
3			X	D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
11	1			D3849-1	PLATE
12		1		D3849-3	PLATE
13			1	D3849-5	PLATE
14	1			D3848-1	GASKET
15		1		D3848-3	GASKET
16			1	D3848-5	GASKET
17	1			D3901-1	BAR
18		1		D3901-3	BAR
19			1	D3901-5	BAR
31	A/R	A/R	A/R	2059B	HARDCOAT
32	A/R	A/R	A/R	1300 (OR 1300L)	3M SCOTCH-GRIP ADHESIVE

A	NEW ISSUE		RF	09.03.30
REV.	DESCRIPTION		BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.		
DRAWN	RF	PORT HADLOCK, WA		
CHECKED		DRAWING NO.	REV. A	
MFG. APPR.		D3849	SHEET 1 OF 8	
APPROVED		TITLE	SCALE	
DE APPR.		WEARPLATE ASSY	NTS	
DATE	09.03.30		<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/06/2009 10:38:01 AM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT WEARPLATE ASSY, STD GEAR

Job Number: 47811

Part Number: D3849045

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DK 09-06-22

13.0

D38485

Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Gasket

batch:

47815

CMF 09-06-22

14.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Bond D3848-5 gasket to inner surface of wearplate using a thin layer of 3m 1300/1300L scotch grip adhesive as per dwg

BATCH:

M 001 428

SB 09/06/22

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09-07-01

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with Dart part # using a fine point permanent marker and Stock

Location:

STORE IN ENG LAB

ENG USE ONLY

09-09-02

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



POSITIVE RECALL

EFFECTIVE

AUTH

RELEASED

DATE

01C

09

09-09-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/06/2009 10:38:01 AM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT WEARPLATE ASSY, STD GEAR

Job Number: 47811

Part Number: D3849045

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

0506-17

7.0

D39015

Bar



Comment: Qty.: 1.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bar

batch: *047816*

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1- On D3901-5 bar, fill cut outs with hardcoat welding rod as per dwg D3849

2059 B Hardcoat Welding Rod

BATCH#: *M 111680*

2- Weld D3901-5 bar to wearplate by positioning holes together as per dwg D3849

304 S.S. Welding Rod

BATCH#: *M 102421*

EL 9-6-17

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

09-06-19

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ENGINEERING APPROVAL
0506-19

09-09-02

11.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME: *7:10 AM*

OVEN TEMPERATURE: *320°F*

FINISH TIME: *7:40 AM*

09-06-22 X2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/06/2009 10:38:01 AM
 User: Melanie Fauteux

Process Sheet

DUPLICATE

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 47811
 Estimate Number : 13895
 P.O. Number :
 This Issue : 11/06/2009 S.O. No. :
 Prsht Rev. : NC
 First Issue : 07/05/2009 Type : LARGE FAB ASSY
 Previous Run :
 Written By :
 Checked & Approved By : ME 09-06-11
 Comment : Est Rev:A 09.04.29 new issue EC verified by:DD

Drawing Name : AFT WEARPLATE ASSY, STD GEAR
 Part Number : D3849045
 Drawing Number : D3849 PREL
 Project Number : N/A
 Drawing Revision : PREL
 Material :
 Due Date : 14/05/2009 Qty: split 2 Um: Each

Additional Product



PRELIMINARY ISSUE

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M304S18GA 304/316 .050 Sheet



Comment: Qty.: 3.7905 sf(s)/Unit Total : 7.5810 sf(s)

304/316 .050 Sheet

batch: 111743 B 9-6-17

2.0 ☒ WATER JET FLOW WATER JET



Comment: FLOW WATER JET

1-Cut as per Dwg D3849

Dwg Rev: _____

Prog Rev: _____

☒ 2-Deburr if necessary

3.0 ☒ QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0 QC8 SECOND CHECK



ENGINEERING
APPROVAL



09.06.15

Comment: SECOND CHECK

Sub 12
See duplicate parts were originally right on!!

5.0 BRAKE NC NC BRAKE



Comment: NC BRAKE

Form as per dwg D3849

SB 02/06/17

Work Order ID 47811

July 9, 2009 1:57:44 PM



Page 5

Item ID: D3849-045
Revision ID: PRELIMINARY
Item Name: AFT WEARPLATE ASSY, FLOAT GEAR
Start Date: 07/09/2009 Start Qty: 2.00
Required Date: 07/09/2009 Req'd Qty: 2.00
Reference: *PH 09.09.02*

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
220 Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo	0.00 0.00							
230 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

STORE IN ENG'G SHED

ENG USE ONLY

*PH 09.09.02**(2) only**MF 09-07-09*

Work Order ID 47811

July 9, 2009 1:57:44 PM

Page 4

Item ID: D3849-045
Revision ID: PRELIMINARY
Item Name: AFT WEARPLATE ASSY, FLOAT GEAR

Accept

Setup Start

Stop

Start Date: 07/09/2009 Start Qty: 2.00

Required Date: 07/09/2009 Req'd Qty: 2.00

Cust Item ID:

Customer:

Reference:




PA 09-09-02

Approvals: Process Plan: Date: Tooling: Date:

QC: Date: SPC (Y/N): Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180  Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QS1005 4.3 Memo	0.00 0.00		✓					
190  QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00		✓					
200  Small Fab Small Fab	 Memo 1-Bond D3848-5 gasket to inner surface of wearplate using a thin layer of 3m 1300/1300L Scotch grip adhesive Batch: _____	0.00 0.00		✓					

Work Order ID 47811

Page 3

July 9, 2009 1:57:44 PM

Item ID: D3849-045
Revision ID: PRELIMINARY
Item Name: AFT WEARPLATE ASSY, FLOAT GEAR

Accept



Setup Start



Stop



Start Date: 07/09/2009 Start Qty: 2.00

Required Date: 07/09/2009 Req'd Qty: 2.00

Cust Item ID:

Customer:

Reference:

09.09.02 RB

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 Large Fab	Memo 1-On D3901-5 bar, fill cut outs with hard coat welding rod as per Dwg 2059b Hardcoat rod Batch: _____ 2-Weld D3901-5 Bar to wearplate by positioning holes together as per Dwg 304ss Welding Rod Batch: _____	0.00 0.00							
160 QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00							
170 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							

Work Order ID 47811

Page 2

July 9, 2009 1:57:44 PM

Item ID: D3849-045
Revision ID: PRELIMINARY
Item Name: AFT WEARPLATE ASSY, FLOAT GEAR

Accept



Setup Start



Stop



Start Date: 07/09/2009 Start Qty: 2.00



Required Date: 07/09/2009 Req'd Qty: 2.00

2

PS

09-09-02

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 ✓ 0.00							
130 Brake NC Brake NC	 Memo Form as per Dwg	0.00 ✓ 0.00							
140 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 ✓ 0.00							

Work Order ID 47811

July 9, 2009 1:57:44 PM



PRELIMINARY ISSUE

Page 1

Item ID: D3849-045
 Revision ID: PRELIMINARY
 Item Name: AFT WEARPLATE ASSY, FLOAT GEAR
 Start Date: 07/09/2009 Start Qty: 2.00
 Required Date: 07/09/2009 Req'd Qty: 2.00
 Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	Waterjet	0.00							
	FLOW CNC Waterjet	0.00							
	Memo								
	1-Cut as per Dwg								
	Dwg Rev: _____								
	Prog Rev: _____								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
	QC	0.00							
	Quality Control								